

**REMARKS**

The Office Action mailed on October 3, 2007 has been reviewed, along with the art cited. Claims 1-29 are pending in this application.

*Information Disclosure Statement*

Applicant respectfully requests that a copy of the 1449 form, listing all references that were submitted with the Information Disclosure Statement filed on July 7, 2005 marked as being considered and initialed by the Examiner, be returned with the next official communication. Copies of the foreign documents listed but not considered are included herewith.

*Rejections Under 35 U.S.C. § 102*

Claims 1-4, 10, 21, 25, and 29 were rejected under 35 USC § 102(b) as being anticipated by Jacobsen et al. (U.S. Patent No. 4,964,306). Claims 1, 4, and 29 have amended thereby overcoming this rejection. Applicant respectfully traverses this rejection.

Claim 1 recites:

A sensing apparatus comprising:

first and second members supported relative to each other by a support;

the first member comprising a magnetic field generator for generating a magnetic field; and

the second member comprising an aerial for monitoring the magnetic field generated by the magnetic field generator,

wherein at least one of the first and second members is locally deformable relative to the other of the first and second members by pressure applied to a localised region thereof in order to vary the electromagnetic coupling between the magnetic field generator and the aerial at the localised region so that a signal is induced in the aerial indicative of the position of the local deformation.

Applicant respectfully asserts that nothing in Jacobsen teaches or suggests all the claimed limitations of claim 1. In particular, nothing in Jacobsen teaches or suggests “at least one of the first and second members is locally deformable relative to the other of the first and second members by pressure applied to a localised region thereof in order to vary the electromagnetic coupling between the magnetic field generator and the aerial at the localised region so that a signal is induced in the aerial indicative of the position of the local deformation.”

Jacobsen et al. disclose a strain gauge that can be bonded to an object that at bonding pads 16 and 20 at the ends thereof. The strain gage is formed by a pair of generally parallel beams 8 and 12 that are held together by struts 24 generally perpendicular to the beams. One of the beams is provided with an emitter 40 for developing an electric magnetic field while the other beam is provided with two detectors 44 and 48 in the form of FETs which are located at positions along the beam on either side of the emitter. *See* Jacobsen col. 3 line 35 – col. 4 line 20.

The strain gauge can then detect strains in the object tending to pull the bonding pads apart as shown in Fig. 2A or pushing the bonding pads toward one another as shown in Fig. 2B by virtue of deformation of the struts 24 which allows the emitter to move with respect to the detectors in the plane of the strain gage. *See* Jacobsen col. 3 lines 54-56 and col. 5 lines 7-35.

According to the present invention as defined in the independent claims, the first and/or second member is locally deformable by pressure applied to a localized region thereof, e.g., by means of a finger as shown in Fig. 1A. The electromagnetic coupling between the magnetic field generator and the aerial is varied at the localized region by virtue of the applied pressure in order to obtain a signal indicative of the position of the localized deformation. *See* Specification pg. 6 line 30 – pg. 7 line 7.

Such a system is not disclosed or contemplated by Jacobsen et al. (‘306). It is not clear which part of the Jacobsen et al strain gauge is considered to constitute the first or second member of the present invention, but whether this is regarded as the beams 8 and 12 or simply those parts of the beams 8 and 12 that carry the emitter 40 and detectors 44

and 48, they are not locally deformable (only the struts 24 are deformable to a slight extent). Even if the struts 24 can deform to some extent as the underlying object strains, Jacobsen et al. ('306) do not disclose any deformation of the frame member 4 and indeed the beams 8 and 12 should not deform in operation since if they did the relative movement of the emitter and the detectors would not follow the relative movement of the underlying object. Furthermore, there is not disclosure of deformation of the strain gauge due to the application of pressure to a localized region. The member would not deform by the application of the pressure given that it is formed from silicon (col. 3, line 39), and any localized pressure applied to the Jacobsen et al. ('306) device would not alter the relative position of the emitter and detectors.

However, the present invention claims that "a signal is induced in the aerial indicative of the position of the local deformation", e.g., the position along the length of the member that is pressed by the user's digit. This is not disclosed or suggested by Jacobsen et al. ('306). Such a requirement is entirely irrelevant to Jacobsen et al. ('306) since all that is being measured is the degree of separation of the bonding pads 16 and 20 of the device. Accordingly, it is considered that the present invention is not disclosed by Jacobsen et al and Applicant respectfully requests that the rejection be withdrawn.

Claims 2-3 depend from claim 1 and, thus, are allowable for at least the reasons stated above with respect to claim 1. Applicant, therefore, requests that the rejections be withdrawn.

In rejecting claims 4 and 29, the Examiner referred to arguments for claim 1. Accordingly, the arguments described above with respect to claim 1 are applicable to claims 4 and 29 and not repeated here for sake of brevity. In particular, nothing in Jacobsen et al. teaches or suggests "at least one of the first and second members is locally deformable relative to the other of the first and second members by pressure applied to a localised region thereof in order to vary the electromagnetic coupling between at least one of i) the transmit aerial and the intermediate coupler, and ii) the intermediate coupler and the receive aerial at the localised region so that a signal is induced in the receive aerial indicative of the position of the local deformation" as claimed in claim 4 for the

reasons stated above. Similarly, nothing in Jacobsen et al. teaches or suggests “at least one of the first and second members is locally deformable relative to the other of the first and second members by pressure applied to a localised region thereof in order to vary the electromagnetic coupling between at least one of i) the transmit aerial and the intermediate coupler, and ii) the intermediate coupler and the receive aerial at the localised region so that a signal is induced in the receive aerial indicative of the position of the local deformation” as claimed in claim 29 for the reasons stated above. Claims 10, 21 and 25 depend from claim 4 and, thus, are allowable for at the reasons stated above. Applicant, therefore, requests that the rejections be withdrawn.

*Rejections Under 35 U.S.C. § 103*

Claim 28 was rejected under 35 USC § 103(a) as being unpatentable over Jacobsen et al. (U.S. Patent No. 4,964,306) in view of Silk et al. (U.S. Appln. Pub. No. 2004/0233178). Claim 28 depends from claim 4 and, thus, inherits the limitations of claim 4. As stated above, nothing in Jacobsen teaches or suggests “at least one of the first and second members is locally deformable relative to the other of the first and second members by pressure applied to a localised region thereof in order to vary the electromagnetic coupling between at least one of i) the transmit aerial and the intermediate coupler, and ii) the intermediate coupler and the receive aerial at the localised region so that a signal is induced in the receive aerial indicative of the position of the local deformation.” Nothing in Silk overcomes the deficiencies of Jacobsen et al.

Furthermore, it is respectfully submitted that it would not be obvious to provide Jacobsen et al. (‘306) with index markings since it is not possible to determine where the local deformation is with the Jacobsen et al. (‘306) device as described above. Therefore, this rejection is respectfully traversed and Applicant requests that the rejection be withdrawn.

Claims 5-9, 11-18, 22-24, and 26-27 were rejected under 35 USC § 103(a) as being unpatentable over Jacobsen et al. (U.S. Patent No. 4,964,306) in view of Silk et al.

(U.S. Appln. Pub. No. 2004/0233178). Claims 5-9, 11-18, 22-24, and 26-27 depend from claim 4 and, thus, inherit the limitations of claim 4 discussed above. As stated above, nothing in Jacobsen et al. teaches or suggests “at least one of the first and second members is locally deformable relative to the other of the first and second members by pressure applied to a localised region thereof in order to vary the electromagnetic coupling between at least one of i) the transmit aerial and the intermediate coupler, and ii) the intermediate coupler and the receive aerial at the localised region so that a signal is induced in the receive aerial indicative of the position of the local deformation.” Nothing in Silk overcomes the deficiencies of Jacobsen et al. It is respectfully submitted that Silk et al. (‘0233178) does not overcome the deficiencies of Jacobsen et al.

In addition, with regard to claims 22-24 and 26-27, Fig. 2 of Silk et al. does not disclose an air gap or deformable material. As disclosed in paragraphs 49 and 50 of Silk et al. (‘0233178), Fig. 2 shows an LCD with various other layers such as PCBs 13 and 15 and electrodes etc., none of which are disclosed as being deformable. Furthermore, the hatching employed in the layers of Fig. 2 suggests that none of the layers is air. Also, given that Silk et al. (‘0233178) describe an electronics device such as a PDA that is operated by means of the stylus, one of skill in the art would not expect the user to attempt to deform the screen. Therefore, this rejection is respectfully traversed and Applicant requests that the rejection be withdrawn.

Claims 19-20 were rejected under 35 USC § 103(a) as being unpatentable over Jacobsen et al. (U.S. Patent No. 4,964,306) in view of Denne (U.S. Patent No. 6,770,988). Applicant respectfully traverses this rejection.

Claims 19-20 depend from claim 4 and, thus, inherit the limitations of claim 4. As stated above, nothing in Jacobsen et al. teaches or suggests “at least one of the first and second members is locally deformable relative to the other of the first and second members by pressure applied to a localised region thereof in order to vary the electromagnetic coupling between at least one of i) the transmit aerial and the intermediate coupler, and ii) the intermediate coupler and the receive aerial at the

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Title: SENSING APPARATUS AND METHOD

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localised region so that a signal is induced in the receive aerial indicative of the position of the local deformation.” It is respectfully submitted that nothing in Denne overcomes the deficiencies of Jacobsen et al. Applicant, therefore, requests that the rejection be withdrawn.

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**CONCLUSION**

Applicant respectfully submits that claims 1-29 are in condition for allowance and notification to that effect is earnestly requested. If necessary, please charge any additional fees or credit overpayments to Deposit Account No. 502432.

If the Examiner has any questions or concerns regarding this application, please contact the undersigned at the telephone number listed below.

Respectfully submitted,

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